

Disaster Risk Governance in Croatia

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Risk governance is mostly viewed through the lens of disaster or emergency management departments, agencies, or organizations. Visible in times of crises, risk governance is rarely seen as part of everyday public or private functions such as planning, social welfare, investments, or fiscal responsibilities. So far, Croatian disaster risk governance was mainly oriented towards disaster response (a military approach), which is based on a decades-old regulatory framework, as was elaborated thoroughly in the previous work. Nevertheless, Croatia has just recently (within the last few years) started switching its focus from disaster risk preparedness to disaster risk management with the introduction of the Homeland Security System Act. While mainly oriented towards disaster response, in general, the Croatian disaster risk management system (regulatory framework) recognizes only two areas of disaster risk management: prevention and response. Therefore, the Croatian disaster risk management system can hardly be fully valorized through the objectives of the Sendai framework for disaster risk reduction.

disaster risk governance

disaster risk management

Croatia

1. Croatian Disaster Risk Prevention Regulatory Framework

So far (prior to the earthquake series), the Croatian government had focused most policies and regulations only in the preparedness and the immediate disaster recovery phases of disaster risk management ^[1], which had left prevention and recovery unattended by laws or policies.

As the main publicly available platform, there is the Croatian platform for disaster risk reduction. It is organized within the Ministry of the Interior of the Republic of Croatia as an activity task of the Civil Protection Directorate. The main task of the Croatian platform for disaster risk reduction is to facilitate disaster risk reduction ^[2] activities, so as to integrate and facilitate the interface for communication and decision making by involving the political, operational, and scientific communities. The work of the platform is regulated mainly with the Homeland Security System Act ^[3] and the Civil Protection System Act ^[4]. The Homeland Defense Act regulates the involvement of military forces in immediate post-disaster relief and recovery activities and the integration of military forces with the civil protection teams after the post-disaster activities. Therefore, the work of the platform for disaster risk reduction is indirectly, but still closely connected to the Homeland Defense Act, where crisis management activities are regulated ^[5]. These laws are also the main regulatory framework, regulating the activities and responsibilities of the Civil Protection Directorate and other involved parties.

The Homeland Security System Act regulates and enables the integration of the work of governmental and nongovernmental bodies with the aim of increasing national safety. On the other hand, the Civil Protection System

Act is the main regulatory basis for all civil protection activities. The Defense Act regulates the involvement of military forces in case of a crisis. Hereafter, military forces can be requested for supporting the humanitarian and disaster stress relief activities.

The Civil Protection System Act regulates the obligations of public authorities and operational capacities, from the local to the state level. It develops a special capacities-headquarters for units and civil protection teams whose activities are needed in a state of emergency, and thus creates a new organizational framework [4] for the country or a region during the emergency state.

The national disaster risk assessment document comments on the available structure of national civil protection: national civil protection is standardized well enough; however, the standardization is achieved through local level strategic documents and regulations which results in general organizational inconsistency. In addition, a major problem, as commented by the national DR assessment document, is the supervision of the regulation's implementation and the organizational structure inconsistency of executive bodies at all levels of the country. Thus, obligations in the field of risk management are either insufficiently recognized or their implementation is not supported to the necessary extent [1].

When considering the question of understanding disaster risk, so far, on the governmental level, the priority of "understanding disaster risk" has been covered only superficially by the publication of the national risk assessment document [1]. Here, no continuous activities have been conducted to enable the rise of awareness to risk exposure at a national level. Further on, the national risk assessment document clearly states that the awareness of risks is still unsatisfactory, and that particular attention should be paid to communicate the disaster risk and possible necessary actions in case of an emergency to citizens effectively, in order to increase the resilience of the citizens themselves and prepare them for an effective interaction with organized parts of the operational capacities of the civil protection system [1]. As the Civil Protection Directorate is the main responsible governmental organization for awareness raising, just recently, the directorate has started with a number of awareness raising projects such as, for instance, an educational awareness raising project for elementary schools which has resulted in the introduction of disaster preparedness training in the elementary school curriculum [4].

So far, Croatia has not developed a disaster risk reduction strategy. Hereafter, even though the only disaster-related activity of the Ministry of Defense is to support civil protection activities in cases of crisis, in its main organizational assessment report, the Ministry of Defense identified a natural related crisis as one of the main risk sources. Hereafter, the Ministry of Defense has prepared a national security strategy which stresses the importance of improving and strengthening the disaster response and short-term recovery capabilities [6][7], which is in line with the activities conducted by the military forces, but not in line with the goals of sustainable long-term recovery planning a government should have.

2. Croatian Laws and Regulations in the Construction Industry Prior the Earthquake Series in Year 2020

Approximately 40–60% of residential units in the region of the Croatian mainland were built prior to the first seismic design codes, based on the analysis conducted using the data presented in the assessment of the vulnerability of the Republic of Croatia to natural and technical technological disasters and major accidents [8].

As Croatia, in general terms, doesn't have an active seismic disaster risk reduction plan, the only Croatian regulatory framework regulating activities in the area of reducing seismic risks would be the Construction Law, which is mainly oriented around regulating any types of activities concerning the built environment [9]. In a built environment, one could reduce the disaster risk posed by an earthquake by changing the use of a building, reducing the risk by moving the threatened to other, safer locations, or by strengthening the existing buildings. Both measures affect the "basic requirements" of the building defined by the Construction Law, which requires obtaining a building permit [9]. In some cases, this can be an exhausting and time-taking process. Furthermore, in a case in which one would need to strengthen a historically protected building, one would act considering the Law on the Protection and Preservation of Cultural Heritage [10]. In this case, as defined by the Law on the Protection and Preservation of Cultural Heritage, the permittance process would be even more complicated and would include even more interested parties in the process [10].

As a part of the European Union, Croatia has adopted Eurocodes as the main construction guidelines and norms. Eurocode 1998-3 does not propose any type of active seismic risk mitigation procedure. The choice of whether to manage seismic threats passively or actively for existing structures is made through the definition of Eurocode 8-3 [11], and left to be defined in national addendums. The passive approach considers the seismic assessment of existing buildings only in cases of activities or events that, for instance, relate to the use of the building and its continuity, whereas the active approach may require owners of certain buildings to consider taking action in terms of the seismic protection of their property.

The Croatian national addendum, the Eurocode 8-3/NA [12], makes no mention of preventive seismic protection, thus the passive approach to seismic risk reduction is used, as defined by the Croatian building law.

It can safely be concluded that in terms of seismic disaster risk reduction, the Croatian construction regulation is rather incomplete. The required actions prior to strengthening or even repair works of a larger scale could present a problem even in the case of a disaster.

3. Croatian Disaster Recovery Framework after Earthquake Series in Year 2020

Prior to the earthquake, the only law to regulate recovery was the *Law on the mitigation and elimination of the consequences of natural disasters*. This law regulates governmental financial responsibility towards all those affected by disasters and the operationalization of the activities of the Ministry of Finances in cases of disasters. The responsibility is instrumentalized through financial support, but includes an assessment of the effects of disastrous events and the allocation of partial financial relief to affected areas [13]. Other institutionalized measures

for disaster recovery were so far regulated only after the occurrence of the disaster, as was the case of the area destracted by the flooding in 2014 [14].

As soon as the first earthquake struck Zagreb, on the governmental level, it was clear that the Croatian legal framework could not be kept as it was. A new legislation would need to come into place to enable recovery and reconstruction works. Nevertheless, even though the legislator had a clear vision of the regulatory framework that needed to be defined, the disaster recovery and reconstruction regulatory framework that was initially prescribed needed to be adapted in accordance with the needs identified during the practical use of the legislation.

On 21 March 2020, the Croatian Government introduced a “stay at home” order for the whole country due to the COVID-19 pandemic, and the very next day, a magnitude 5.5 earthquake shook the capital city of Zagreb [15]. The regulatory framework for disaster recovery was structured in a series of different measures: the suspension of COVID-19 restricting measures in the affected areas, financial relief and support, disaster emergency housing, emergency repair support in terms of financial and workforce organization, and finally, the framework supporting the recovery and repair of damaged infrastructure and the built environment.

The main goal of the regulatory framework, after the earthquake series, was to assist the owners or co-owners of damaged and destroyed real estate to setup their estates quickly and with less effort in comparison to the previously available legal framework. The first recovery and reconstruction law was created to aid the affected areas of the first earthquake: *A Law on the reconstruction of buildings damaged by earthquakes in the city of Zagreb, Krapina-Zagorje County and Zagreb County* [16]. The main goals of the law were to reduce and simplify the documentation needed for the approval of the reconstruction, and:

- To establish the “Reconstruction fund”—the main governmental executive body for the organization, implementation, and monitoring of the implementation of reconstruction activities of earthquake-damaged buildings [17].
- To define the process of building reconstruction in case the building was only damaged, and the construction of replacement housing in case a house was destroyed or damaged in a way that repair would not possible or would be financially inefficient.
- To prescribe financial support for temporary repair works, building reconstruction and repair works.

In addition to the law, in October 2020, the first program of measures for the reconstruction of earthquake damaged buildings in the city of Zagreb, Krapina-Zagorje County and Zagreb County, was prescribed. This program of measures defines the levels and scopes of repair and/or reconstruction that can be financed from the Reconstruction fund. Furthermore, it defines the organizational structure of the governmental bodies responsible for activities in the reconstruction, the criteria for the project parties’ selection, reconstruction priorities, etc., [18]. As the title of the law shows, the law regulates the recovery measures only in the affected areas and cannot be implemented outside of the mentioned counties.

By October 2020, 7 months after the earthquake passed, the emergency repair works were mainly done; besides these, only a few reconstruction projects had started, among which the city of Zagreb was the main investor. By that time, even though there is no official data, the number of reconstruction activities in the affected region was at the minimum.

With the occurrence of the second earthquake series in the area of Petrinja (Sisak-Moslavina county), an amendment of the already existing law on reconstruction was made with the law amendments from February 2021 [19] (just two months after the December earthquake series). As the new situation required a new approach, the amendment of the law was not only used to broaden the area of use to the new affected areas, but also to accommodate new needs. Except for the historic city centers in the affected areas of Sisak-Moslavina County and the other affected areas, these areas are more rural types, with occasional historic buildings and the occasional industrial facilities, which have now sustained major damages, as opposed to the earthquakes of Zagreb where most damages were sustained in the historical buildings which were not designed to withstand seismic activities of any kind.

By the time of the law amendment publication, the Reconstruction fund began to function as intended, resulting in the first 231 finished reconstruction investments with an investment sum of about 1.1 mil EUR [20]. As the earthquake from December 2021 had more serious consequences than the one from Zagreb County (March 2021) the main changes in legislation were oriented towards creating the emergency housing capacities for people whose homes were destroyed or severely damaged. Therefore, a part of the responsibilities and powers which were mainly activities of the Reconstruction fund were transferred to the Central State Office for Reconstruction and Housing to divide the intensity and the activity scope of the Reconstruction fund [19].

During the reconstruction process, several main issues were encountered that were slowing down the reconstruction process:

- The owners (potential investors) were not allowed to start reconstruction on their own as, to be entitled for the governmental funding, the reconstruction process had to start via the governmental administration [21], for which the process was rather sluggish.
- Co-financing measures were limited to 80% of the cost of the structural renovation of a building which, in the whole process of reconstruction, would cover no more than 30% of the whole reconstruction investment, causing many potential investors to give up on the potential reconstruction investment [22]
- There was a problem of unresolved ownership relations for which the process of renewal was entirely disabled, even for cases when real ownership was not in question, but it was not legally implemented, or the legal trace of ownership was difficult to prove (a problem expressed in rural parts of Croatia) [23]
- Construction works' prices rose uncontrollably on the global market, which was more pronounced in Croatia due to a sped-up increase in the demand in construction and reconstruction works and the COVID-19 sanitary crisis. Hereby, the owners' ability to invest was severely diminished [24]
- The affected area was widely marked by cultural heritage buildings, which also made up a significant share of the damaged buildings. The necessary activities of the relevant administration for cultural heritage are poorly defined

even by basic laws, which is even more evident in crisis situations [25]

- The reconstruction process indicated some administrative deficiencies in the process [21][25], among which is that, for instance, the demolition of heavily damaged buildings that potentially threaten the environment requires a series of administrative approvals.

Still, even with the flaws of the law, the rate of investments in reconstruction rose to 792 reconstruction investments in total and approximately 5.6 mil EUR [20]. In relation to this, investments rose from 33 cases per month and approximately 160,000 EUR/month to 99 cases/month and 700,000 EUR/month. These numbers cannot be taken as the absolute measure of the success of the laws, but still, they can be taken as an indicator that the reconstruction measures are giving positive results.

These mentioned issues were to be resolved by the latest amendment of the law on reconstruction [26] with the next measures:

- The main and most important change is the reorganization and improved definition of the tasks of governmental bodies included in the process of reconstruction. The improvements also include the definition of the maximum allowed time for decision making in the process of project approval or the definition of requested conditions that must be obeyed (e.g., preservation measures for cultural heritage buildings).
 - The governmental financial support for reconstruction increased from 80 to 100% of the construction and reconstruction cost, with the possibility to receive the governmental subsidies in advance (only in cases where the buildings had a legal and official representative). This reduces the initial cost of reconstruction and repairs at the start of the investment process.
- For the cases where family house owners are willing to invest into the recovery of their real estate, they are now allowed to finance the works by themselves with the possibility to request a full refund for the applicable reconstruction costs (only for the construction/reconstruction).
- To improve the implementation rate of the law, the state can buy off the ownership of a building or a part of the ownership to improve the implementation of the law on reconstruction.
- The demolition of heavily damaged buildings is financed completely by the government, and in the case where a building is endangering the surroundings or persons, the building can be demolished through a shortened administrative procedure (with a duration of up to 5 days), where the owners of a demolished real estate have the possibility to receive a financial reimbursement for their real estate or they can request a replacement house (only for real estate where owners were living in at the time of the earthquake).

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